Low Impact Development Technical Guidance Manual for Puget Sound

Bruce Wulkan, Puget Sound Action Team

Low impact development (LID) is a stormwater management and land development strategy that typically is applied to projects at the individual parcel or subdivision scale. This strategy emphasizes conservation and use of on-site natural features combined with engineered, small-scale hydrologic controls to closely mimic pre-development hydrology. The goal of LID is to prevent measurable harm to streams, lakes, wetlands and other natural aquatic systems resulting from commercial, residential, or industrial development.

Photo by Colleen Owen

Permeable pavers were installed at this Marysville parking lot for infiltration.

Puget Sound Action Team (PSAT) and Washington State University Pierce County Extension have developed a *Low Impact Development Technical Guidance Manual for Puget Sound*. The manual contains detailed guidance on how best to design, construct and maintain LID practices. The target audience includes engineers, planners, developers, builders, architects, landscape architects and others who design, review, permit, and build using LID techniques.

Purpose of the manual

The manual provides professionals involved in stormwater management and land development with a common understanding of LID goals and objectives. It provides a framework for site assessment and project design and gives specifications for individual projects. The manual also explains how individuals can obtain credits to help them reduce the size of their stormwater facilities by using LID techniques. The manual presents findings from national and international research and monitoring to help professionals make informed decisions when using LID techniques.

Why do we need LID?

Research shows that conventional development practices do not fully protect water quality, fish and wildlife habitat, and other aquatic resources from the adverse effects of development and stormwater runoff. The Washington Department of Ecology estimates that, of all waters on the state's list of polluted water bodies, about 30% are polluted because of stormwater runoff.

Pollution from nonpoint (or dispersed) sources, including stormwater runoff, has closed thousands of acres of shellfish growing areas. Federal agencies cite the loss of habitat due to development and stormwater runoff as one of the factors limiting salmon populations. Low impact development practices offer great potential

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Proper Functioning Condition Methodology Aids Spokane County with Shoreline Management Update

Walt Edelen, Spokane County Conservation District

The Spokane County Conservation District (SCCD) recently completed a two-year shoreline inventory and assessment to provide information on the ecological condition and physical characteristics of riparian habitat and watersheds in Spokane County. The goal was to generate a useful product for decision-makers, especially to inform decisions regarding local Shoreline Management Plans (SMP) and Critical Areas Ordinances. Data from the assessment was put into Geographic Information System (GIS) form so local officials could readily obtain it to inform their decisions regarding local land use planning activities.

Background

This shoreline inventory and assessment came into being though the cooperation of concerned citizens, local government entities, the Washington Department of Ecology (WDOE), Department of Fish and Wildlife, SCCD, and the Washington Environmental Council. For the past two years, this group scoped out the project, obtained funding, and completed this important work.

Photo courtesy of Spokane County Conservation District

Large woody debris along the West Branch of the Little Spokane River.

Methods and Findings

The current functional status of riparian and watershed conditions was determined through using the Proper Functioning Condition (PFC) methodology as described in Technical Report 1737-15 (Bureau of Land Management, 1998). This qualitative methodology used a rapid assessment protocol that incorporated the best available quantitative science. In all, the analysis involved an assessment of 17 hydrologic, vegetative, and soils/geological attributes that were directly tied to the functionality of riparian systems. By using the PFC methodology, each stream reach was classified into one of four categories of functionality (i.e., proper functioning condition, functional-at-risk, nonfunctional, and unknown). Of the evaluated reaches, 71% of the river miles were in proper functioning condition, 27% were functional-at-risk, and 2% were non-functional.

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